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QUALCOMM, INC
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EXAMINER

FOX, BRYAN J

ART UNIT	PAPER NUMBER
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2617

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/650,401

Applicant(s)

ROLAND ET AL.

Examiner

Bryan J. Fox

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2, 7, 10-15, 18-22, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willey in view of Lee et al (US 20030174674A1).

Regarding **claim 1**, Willey discloses that a wireless communication device measures neighbor pilot strengths and provides the identities of the base stations corresponding to the measured pilot strengths to the system infrastructure in the initial access probe, indicating at least one neighboring pilot that has sufficient measured pilot strength that an associated paging channel could be successfully demodulated (see column 3, lines 51-67), which reads on the claimed, "device in a wireless

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communication system, comprising: a reselection unit operative to provide an indication to perform cell reselection from a first base station to a second base station; a control unit operative to initiate a cell reselection procedure for the second base station in response to the indication from the reselection unit, wherein the first base station is a current serving cell and the cell reselection procedure selects the second base station as a new serving cell.” The wireless communication device begins monitoring the Paging Channels of the active pilot and the at least one neighboring pilot, thus, a soft handoff is made and the wireless communication device demodulates the Paging Channel from at least one neighboring pilot as well as the mobile station’s current active pilot (see column 3, lines 51-67), which reads on the claimed, “monitoring unit operative to receive sufficient system information to process a paging channel for the second base station and to start monitoring the paging channel upon reception of the sufficient system information... and prior to completion of the cell reselection procedure.” Willey fails to disclose receiving from the second base station sufficient system information to process a paging channel for the second base station.

In a similar field of endeavor, Lee et al disclose a system where a mobile station receives an overhead message of a paging channel transmitted from the neighbor base station with an extended CDMA channel list message of a paging channel transmitted from the neighbor base station and another overhead message of the paging channel transmitted from the neighbor base station, which is an extended system parameter message of the paging channel (see paragraphs 43-48), which reads on the claimed

receiving from the second base station sufficient system information to process a paging channel for the second base station.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Willey with Lee et al to include the above reception of system information from the second base station in order to provide a method for performing handoff and supporting the handoff with is able to perform the handoff without entering into system determination substate.

Regarding **claim 2**, the combination of Willey and Lee et al discloses that the infrastructure uses the reported identities and measured pilot strengths to allocate the base station for soft handoff and to transmit the paging channel messages over the paging channels of the base stations corresponding to the active pilot and the reported neighboring pilots. After performing each access probe, logic and control circuit assigns a plurality of finger receivers to the active pilot and the reported neighboring pilots, and the assigned receiver fingers simultaneously demodulate the paging channels of the respective base stations (see Willey column 6, lines 7-27), which reads on the claimed, “the control unit is operative to direct reception of full system information for the second base station in order to complete the cell reselection procedure and for two-way communication with the second base station.”

Regarding **claim 7**, Willey discloses that a wireless communication device measures neighbor pilot strengths and provides the identities of the base stations corresponding to the measured pilot strengths to the system infrastructure in the initial access probe, indicating at least one neighboring pilot that has sufficient measured pilot

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strength that an associated paging channel could be successfully demodulated (see column 3, lines 51-67), which reads on the claimed, "apparatus in a wireless communication system, comprising: means for providing an indication to perform cell reselection from a first base station to a second base station; means for performing a cell reselection procedure for the second base station in response to the indication from the reselection unit, wherein the first base station is a current serving cell and the cell reselection procedure selects the second base station as a new serving cell." The wireless communication device begins monitoring the Paging Channels of the active pilot and the at least one neighboring pilot, thus, a soft handoff is made and the wireless communication device demodulates the Paging Channel from at least one neighboring pilot as well as the mobile station's current active pilot (see column 3, lines 51-67), which reads on the claimed, "means for receiving... sufficient system information to process a paging channel for the second base station; and means for starting monitoring of the paging channel upon receiving the sufficient system information... and prior to completing the cell reselection procedure." Willey fails to disclose receiving from the second base station sufficient system information to process a paging channel for the second base station.

In a similar field of endeavor, Lee et al disclose a system where a mobile station receives an overhead message of a paging channel transmitted from the neighbor base station with an extended CDMA channel list message of a paging channel transmitted from the neighbor base station and another overhead message of the paging channel transmitted from the neighbor base station, which is an extended system parameter

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message of the paging channel (see paragraphs 43-48), which reads on the claimed receiving from the second base station sufficient system information to process a paging channel for the second base station.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Willey with Lee et al to include the above reception of system information from the second base station in order to provide a method for performing handoff and supporting the handoff with is able to perform the handoff without entering into system determination substate.

Regarding **claim 10**, Willey discloses that a wireless communication device measures neighbor pilot strengths and provides the identities of the base stations corresponding to the measured pilot strengths to the system infrastructure in the initial access probe, indicating at least one neighboring pilot that has sufficient measured pilot strength that an associated paging channel could be successfully demodulated (see column 3, lines 51-67), which reads on the claimed, "method of performing cell reselection in a wireless communication system, comprising: providing an indication to perform cell reselection from a first base station to a second base station; performing a cell reselection procedure for the second base station in response to the indication to perform cell reselection, wherein the first base station is a current serving cell and the cell reselection procedure selects the second base station as a new serving cell." The wireless communication device begins monitoring the Paging Channels of the active pilot and the at least one neighboring pilot, thus, a soft handoff is made and the wireless communication device demodulates the Paging Channel from at least one neighboring

pilot as well as the mobile station's current active pilot (see column 3, lines 51-67), which reads on the claimed, "receiving... sufficient system information to process a paging channel for the second base station; and starting monitoring of the paging channel upon receiving the sufficient system information... and prior to completing the cell reselection procedure." Willey fails to disclose receiving from the second base station sufficient system information to process a paging channel for the second base station.

In a similar field of endeavor, Lee et al disclose a system where a mobile station receives an overhead message of a paging channel transmitted from the neighbor base station with an extended CDMA channel list message of a paging channel transmitted from the neighbor base station and another overhead message of the paging channel transmitted from the neighbor base station, which is an extended system parameter message of the paging channel (see paragraphs 43-48), which reads on the claimed, receiving from the second base station sufficient system information to process a paging channel for the second base station.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Willey with Lee et al to include the above reception of system information from the second base station in order to provide a method for performing handoff and supporting the handoff with is able to perform the handoff without entering into system determination substate.

Regarding **claim 11**, Willey discloses that a wireless communication device measures neighbor pilot strengths and provides the identities of the base stations

corresponding to the measured pilot strengths to the system infrastructure in the initial access probe, indicating at least one neighboring pilot that has sufficient measured pilot strength that an associated paging channel could be successfully demodulated (see column 3, lines 51-67), which reads on the claimed, "processor readable media for storing instructions operable in a wireless device to: provide an indication to perform cell reselection from a first base station to a second base station in a wireless communication system; perform a cell reselection procedure for the second base station in response to the indication to perform cell reselection, wherein the first base station is a current serving cell and the cell reselection procedure selects the second base station as a new serving cell." The wireless communication device begins monitoring the Paging Channels of the active pilot and the at least one neighboring pilot, thus, a soft handoff is made and the wireless communication device demodulates the Paging Channel from at least one neighboring pilot as well as the mobile station's current active pilot (see column 3, lines 51-67), which reads on the claimed, "receive... sufficient system information to process a paging channel for the second base station; and start monitoring of the paging channel upon receiving the sufficient system information...and prior to completing the cell reselection procedure." Willey fails to disclose receiving from the second base station sufficient system information to process a paging channel for the second base station.

In a similar field of endeavor, Lee et al disclose a system where a mobile station receives an overhead message of a paging channel transmitted from the neighbor base station with an extended CDMA channel list message of a paging channel transmitted

from the neighbor base station and another overhead message of the paging channel transmitted from the neighbor base station, which is an extended system parameter message of the paging channel (see paragraphs 43-48), which reads on the claimed, receiving from the second base station sufficient system information to process a paging channel for the second base station.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Willey with Lee et al to include the above reception of system information from the second base station in order to provide a method for performing handoff and supporting the handoff with is able to perform the handoff without entering into system determination substate.

Regarding **claim 12**, Willey discloses that a wireless communication device measures neighbor pilot strengths and provides the identities of the base stations corresponding to the measured pilot strengths to the system infrastructure in the initial access probe, indicating at least one neighboring pilot that has sufficient measured pilot strength that an associated paging channel could be successfully demodulated (see column 3, lines 51-67), which reads on the claimed, "device in a wireless communication system, comprising: a reselection unit operative to provide an indication to perform cell reselection from a first base station to a second base station." The wireless communication device begins monitoring the Paging Channels of the active pilot and the at least one neighboring pilot, thus, a soft handoff is made and the wireless communication device demodulates the Paging Channel from at least one neighboring pilot as well as the mobile station's current active pilot (see column 3, lines 51-67),

which reads on the claimed, "control unit operative to, in response to the indication from the reselection unit, direct reception of designated system information from a control channel for the second base station, and if the designated system information...is received successfully, switch to the second base station and initiate a cell reselection procedure for the second base station, wherein the first base station is a current serving cell and the cell reselection procedure selects the second base station as a new serving cell," wherein the acknowledgement (see figure 2) reads on the designated system information. Willey fails to disclose receiving from the second base station sufficient system information to process a paging channel for the second base station.

In a similar field of endeavor, Lee et al disclose a system where a mobile station receives an overhead message of a paging channel transmitted from the neighbor base station with an extended CDMA channel list message of a paging channel transmitted from the neighbor base station and another overhead message of the paging channel transmitted from the neighbor base station, which is an extended system parameter message of the paging channel (see paragraphs 43-48), which reads on the claimed, receiving from the second base station sufficient system information to process a paging channel for the second base station.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Willey with Lee et al to include the above reception of system information from the second base station in order to provide a method for performing handoff and supporting the handoff with is able to perform the handoff without entering into system determination substate.

Regarding **claim 13**, the combination of Willey and Lee et al discloses that the infrastructure uses these reported identities and measured pilot strengths to allocate the base station for soft handoff and to transmit the paging channel messages over the paging channels of the base stations corresponding to the active pilot and the reported neighboring pilots. After performing each access probe, logic and control circuit assigns a plurality of finger receivers to the active pilot and the reported neighboring pilots, and the assigned receiver fingers simultaneously demodulate the paging channels of the respective base stations (see Willey column 6, lines 7-27), which reads on the claimed, “the control unit is operative to direct reception of full system information for the second base station in order to complete the cell reselection procedure and for two-way communication with the second base station.”

Regarding **claim 14**, the combination of Willey and Lee et al discloses that a wireless communication device measures neighbor pilot strengths and provides the identities of the base stations corresponding to the measured pilot strengths to the system infrastructure in the initial access probe, indicating at least one neighboring pilot that has sufficient measured pilot strength that an associated paging channel could be successfully demodulated and the wireless communication device begins monitoring the Paging Channels of the active pilot and the at least one neighboring pilot, thus, a soft handoff is made and the wireless communication device demodulates the Paging Channel from at least one neighboring pilot as well as the mobile station’s current active pilot (see Willey column 3, lines 51-67), which reads on the claimed, “monitoring unit operative to obtain, from the designated system information, sufficient system

information to process a paging channel for the second base station and to initiate monitoring of the paging channel when the cell reselection procedure is initiated.”

Regarding **claim 15**, the combination of Willey and Lee et al discloses that a wireless communication device measures neighbor pilot strengths and provides the identities of the base stations corresponding to the measured pilot strengths to the system infrastructure in the initial access probe, indicating at least one neighboring pilot that has sufficient measured pilot strength that an associated paging channel could be successfully demodulated and the wireless communication device begins monitoring the Paging Channels of the active pilot and the at least one neighboring pilot, thus, a soft handoff is made and the wireless communication device demodulates the Paging Channel from at least one neighboring pilot as well as the mobile station's current active pilot (see Willey column 3, lines 51-67), which reads on the claimed, “monitoring unit operative to receive sufficient system information to process a paging channel for the second base station and to initiate monitoring of the paging channel upon reception of the sufficient information and prior to completion of the cell reselection procedure.”

Regarding **claim 18**, Willey discloses that a wireless communication device measures neighbor pilot strengths and provides the identities of the base stations corresponding to the measured pilot strengths to the system infrastructure in the initial access probe, indicating at least one neighboring pilot that has sufficient measured pilot strength that an associated paging channel could be successfully demodulated (see column 3, lines 51-67), which reads on the claimed, “apparatus in a wireless communication system, comprising: means for providing an indication to perform cell

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reselection from a first base station to a second base station.” The wireless communication device begins monitoring the Paging Channels of the active pilot and the at least one neighboring pilot, thus, a soft handoff is made and the wireless communication device demodulates the Paging Channel from at least one neighboring pilot as well as the mobile station’s current active pilot (see column 3, lines 51-67), which reads on the claimed, “means for receiving and decoding designated system information from a control channel for the second base station in response to the indication to perform cell reselection; and means for, if the designated system information...is decoded successfully, switching over to the second base station and performing a cell reselection procedure for the second base station, wherein the first base station is a current serving cell and the cell reselection procedure selects the second base station as a new serving cell,” wherein the acknowledgement (see figure 2) reads on the designated system information. Willey fails to disclose receiving from the second base station sufficient system information to process a paging channel for the second base station.

In a similar field of endeavor, Lee et al disclose a system where a mobile station receives an overhead message of a paging channel transmitted from the neighbor base station with an extended CDMA channel list message of a paging channel transmitted from the neighbor base station and another overhead message of the paging channel transmitted from the neighbor base station, which is an extended system parameter message of the paging channel (see paragraphs 43-48), which reads on the claimed,

receiving from the second base station sufficient system information to process a paging channel for the second base station.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Willey with Lee et al to include the above reception of system information from the second base station in order to provide a method for performing handoff and supporting the handoff with is able to perform the handoff without entering into system determination substate.

Regarding **claim 19**, the combination of Willey and Lee et al discloses that a wireless communication device measures neighbor pilot strengths and provides the identities of the base stations corresponding to the measured pilot strengths to the system infrastructure in the initial access probe, indicating at least one neighboring pilot that has sufficient measured pilot strength that an associated paging channel could be successfully demodulated and the wireless communication device begins monitoring the Paging Channels of the active pilot and the at least one neighboring pilot, thus, a soft handoff is made and the wireless communication device demodulates the Paging Channel from at least one neighboring pilot as well as the mobile station's current active pilot (see Willey column 3, lines 51-67), which reads on the claimed, "means for starting monitoring of a paging channel for the second base station upon receiving sufficient system information to process the paging channel and prior to completing the cell reselection procedure."

Regarding **claim 20**, Willey discloses that a wireless communication device measures neighbor pilot strengths and provides the identities of the base stations

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corresponding to the measured pilot strengths to the system infrastructure in the initial access probe, indicating at least one neighboring pilot that has sufficient measured pilot strength that an associated paging channel could be successfully demodulated (see column 3, lines 51-67), which reads on the claimed, "method of performing cell reselection in a wireless communication system, comprising: providing an indication to perform cell reselection from a first base station to a second base station." The wireless communication device begins monitoring the Paging Channels of the active pilot and the at least one neighboring pilot, thus, a soft handoff is made and the wireless communication device demodulates the Paging Channel from at least one neighboring pilot as well as the mobile station's current active pilot (see column 3, lines 51-67), which reads on the claimed, "receiving and decoding designated system information from a control channel for the second base station in response to the indication to perform cell reselection; and if the designated system information...is decoded successfully, switching over to the second base station, and performing a cell reselection procedure for the second base station, wherein the first base station is a current serving cell and the cell reselection procedure selects the second base station as a new serving cell," wherein the acknowledgement (see figure 2) reads on the designated system information. Willey fails to disclose receiving from the second base station sufficient system information to process a paging channel for the second base station.

In a similar field of endeavor, Lee et al disclose a system where a mobile station receives an overhead message of a paging channel transmitted from the neighbor base

station with an extended CDMA channel list message of a paging channel transmitted from the neighbor base station and another overhead message of the paging channel transmitted from the neighbor base station, which is an extended system parameter message of the paging channel (see paragraphs 43-48), which reads on the claimed, receiving from the second base station sufficient system information to process a paging channel for the second base station.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Willey with Lee et al to include the above reception of system information from the second base station in order to provide a method for performing handoff and supporting the handoff with is able to perform the handoff without entering into system determination substate.

Regarding **claim 21**, the combination of Willey and Lee et al discloses that a wireless communication device measures neighbor pilot strengths and provides the identities of the base stations corresponding to the measured pilot strengths to the system infrastructure in the initial access probe, indicating at least one neighboring pilot that has sufficient measured pilot strength that an associated paging channel could be successfully demodulated and the wireless communication device begins monitoring the Paging Channels of the active pilot and the at least one neighboring pilot, thus, a soft handoff is made and the wireless communication device demodulates the Paging Channel from at least one neighboring pilot as well as the mobile station's current active pilot (see Willey column 3, lines 51-67), which reads on the claimed, "the designated system information includes sufficient system information to process a paging channel

for the second base station, the method further comprising: starting monitoring of the paging channel for the second base station upon performing the cell reselection procedure.”

Regarding **claim 22**, the combination of Willey and Lee et al discloses that a wireless communication device measures neighbor pilot strengths and provides the identities of the base stations corresponding to the measured pilot strengths to the system infrastructure in the initial access probe, indicating at least one neighboring pilot that has sufficient measured pilot strength that an associated paging channel could be successfully demodulated and the wireless communication device begins monitoring the Paging Channels of the active pilot and the at least one neighboring pilot, thus, a soft handoff is made and the wireless communication device demodulates the Paging Channel from at least one neighboring pilot as well as the mobile station’s current active pilot (see Willey column 3, lines 51-67), which reads on the claimed, “receiving sufficient system information to process a paging channel for the second base station; and starting monitoring of the paging channel for the second base station upon receiving the sufficient system information and prior to completing the cell reselection procedure.”

Regarding **claim 32**, Willey fails to disclose the cell reselection procedure is initiated when the device is in an idle mode.

In a similar field of endeavor, Lee et al discloses the use of idle handover (see paragraph 38).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Willey with Lee et al to include the above idle handover in order

to provide a method for performing handoff and supporting the handoff with is able to perform the handoff without entering into system determination substate.

Regarding **claim 33**, Willey fails to disclose no transmissions are sent to the first or second base station for the cell reselection procedure.

In a similar field of endeavor, Lee et al discloses a system for handover without any transmissions are sent to the first or second base station for the cell reselection procedure (see, e.g., figure 3).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Willey with Lee et al to include the above elimination of transmissions to the first or second base station for the cell reselection procedure in order to provide a method for performing handoff and supporting the handoff with is able to perform the handoff without entering into system determination substate.

Claims 23, 24, 26, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willey in view of Lee et al, and further in view of Weaver, Jr et al (US005828661A).

Regarding **claim 23**, Willey discloses that a wireless communication device measures neighbor pilot strengths and provides the identities of the base stations corresponding to the measured pilot strengths to the system infrastructure in the initial access probe, indicating at least one neighboring pilot that has sufficient measured pilot strength that an associated paging channel could be successfully demodulated (see column 3, lines 51-67), which reads on the claimed, "device in a wireless

communication system, comprising: a reselection unit operative to provide an indication to perform cell reselection from a first base station to a second base station; a control unit operative to initiate a cell reselection procedure for the second base station in response to the indication from the reselection unit, wherein the first base station is a current serving cell and the cell reselection procedure selects the second base station as a new serving cell.” The wireless communication device begins monitoring the Paging Channels of the active pilot and the at least one neighboring pilot, thus, a soft handoff is made and the wireless communication device demodulates the Paging Channel from at least one neighboring pilot as well as the mobile station’s current active pilot (see column 3, lines 51-67), which reads on the claimed, “monitoring unit operative to monitor a first paging channel for the first base station...to receive...sufficient system information to process a second paging channel for the second base station, and to monitor the second paging channel upon receiving the sufficient system information..., wherein the monitoring of the first paging channel and the monitoring of the second paging channel overlap in time.” Willey fails to disclose receiving from the second base station sufficient system information to process a paging channel for the second base station.

In a similar field of endeavor, Lee et al disclose a system where a mobile station receives an overhead message of a paging channel transmitted from the neighbor base station with an extended CDMA channel list message of a paging channel transmitted from the neighbor base station and another overhead message of the paging channel transmitted from the neighbor base station, which is an extended system parameter

message of the paging channel (see paragraphs 43-48), which reads on the claimed, receiving from the second base station sufficient system information to process a paging channel for the second base station.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Willey with Lee et al to include the above reception of system information from the second base station in order to provide a method for performing handoff and supporting the handoff with is able to perform the handoff without entering into system determination substate. The combination of Willey and Lee et al fails to expressly disclose ceasing to monitor the paging channel upon a terminating event.

In a similar field of endeavor, Weaver, Jr. et al discloses a system where a soft handoff ends when communication with the first base station is terminated (see column 2, lines 51-65).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Willey and Lee et al with Weaver, Jr. et al to include the above termination of communication with the first base station in order to save resources when the terminal is no longer in range of the first base station.

Regarding **claim 24**, the combination of Willey, Lee et al and Weaver, Jr. et al discloses that the infrastructure uses the reported identities and measured pilot strengths to allocate the base station for soft handoff and to transmit the paging channel messages over the paging channels of the base stations corresponding to the active pilot and the reported neighboring pilots. After performing each access probe, logic and control circuit assigns a plurality of finger receivers to the active pilot and the reported

neighboring pilots, and the assigned receiver fingers simultaneously demodulate the paging channels of the respective base stations (see Willey column 6, lines 7-27), which reads on the claimed, "the control unit is operative to direct reception of full system information for the second base station in order to complete the cell reselection procedure and for two-way communication with the second base station."

Regarding **claim 26**, the combination of Willey, Lee et al and Weaver, Jr. et al discloses that the infrastructure uses the reported identities and measured pilot strengths to allocate the base station for soft handoff and to transmit the paging channel messages over the paging channels of the base stations corresponding to the active pilot and the reported neighboring pilots (see Willey column 6, lines 7-27), which reads on the claimed, "the control unit is further operative to initiate registration with the second base station."

Regarding **claim 30**, Willey discloses that a wireless communication device measures neighbor pilot strengths and provides the identities of the base stations corresponding to the measured pilot strengths to the system infrastructure in the initial access probe, indicating at least one neighboring pilot that has sufficient measured pilot strength that an associated paging channel could be successfully demodulated (see column 3, lines 51-67), which reads on the claimed, "apparatus in a wireless communication system, comprising: means for providing an indication to perform cell reselection from a first base station to a second base station; means for performing a cell reselection procedure for the second base station in response to the indication to perform cell reselection, wherein the first base station is a current serving cell and the

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cell reselection procedure selects the second base station as a new serving cell; means for monitoring a first paging channel for the first base station.” The wireless communication device begins monitoring the Paging Channels of the active pilot and the at least one neighboring pilot, thus, a soft handoff is made and the wireless communication device demodulates the Paging Channel from at least one neighboring pilot as well as the mobile station's current active pilot (see column 3, lines 51-67), which reads on the claimed, “means for receiving... sufficient system information to process a second paging channel for the second base station; and means for monitoring the second paging channel upon receiving the sufficient system information..., wherein the monitoring of the first paging channel and the monitoring of the second paging channel overlap in time.” Willey fails to disclose receiving from the second base station sufficient system information to process a paging channel for the second base station.

In a similar field of endeavor, Lee et al disclose a system where a mobile station receives an overhead message of a paging channel transmitted from the neighbor base station with an extended CDMA channel list message of a paging channel transmitted from the neighbor base station and another overhead message of the paging channel transmitted from the neighbor base station, which is an extended system parameter message of the paging channel (see paragraphs 43-48), which reads on the claimed, receiving from the second base station sufficient system information to process a paging channel for the second base station.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Willey with Lee et al to include the above reception of system information from the second base station in order to provide a method for performing handoff and supporting the handoff with is able to perform the handoff without entering into system determination substate. The combination of Willey and Lee et al fails to expressly disclose ceasing to monitor the paging channel upon a terminating event.

In a similar field of endeavor, Weaver, Jr. et al discloses a system where a soft handoff ends when communication with the first base station is terminated (see column 2, lines 51-65).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Willey and Lee et al with Weaver, Jr. et al to include the above termination of communication with the first base station in order to save resources when the terminal is no longer in range of the first base station.

Regarding **claim 31**, Willey discloses that a wireless communication device measures neighbor pilot strengths and provides the identities of the base stations corresponding to the measured pilot strengths to the system infrastructure in the initial access probe, indicating at least one neighboring pilot that has sufficient measured pilot strength that an associated paging channel could be successfully demodulated (see column 3, lines 51-67), which reads on the claimed, "method for performing cell reselection in a wireless communication system, comprising: providing an indication to perform cell reselection from a first base station to a second base station; performing a cell reselection procedure for the second base station in response to the indication to

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perform cell reselection, wherein the first base station is a current serving cell and the cell reselection procedure selects the second base station as a new serving cell.” The wireless communication device begins monitoring the Paging Channels of the active pilot and the at least one neighboring pilot, thus, a soft handoff is made and the wireless communication device demodulates the Paging Channel from at least one neighboring pilot as well as the mobile station’s current active pilot (see column 3, lines 51-67), which reads on the claimed, “monitoring a first paging channel for the first base station...receiving...sufficient system information to process a second paging channel for the second base station; and monitoring the second paging channel upon receiving the sufficient system information..., wherein the monitoring of the first paging channel and the monitoring of the second paging channel overlap in time.” Willey fails to disclose receiving from the second base station sufficient system information to process a paging channel for the second base station.

In a similar field of endeavor, Lee et al disclose a system where a mobile station receives an overhead message of a paging channel transmitted from the neighbor base station with an extended CDMA channel list message of a paging channel transmitted from the neighbor base station and another overhead message of the paging channel transmitted from the neighbor base station, which is an extended system parameter message of the paging channel (see paragraphs 43-48), which reads on the claimed, receiving from the second base station sufficient system information to process a paging channel for the second base station.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Willey with Lee et al to include the above reception of system information from the second base station in order to provide a method for performing handoff and supporting the handoff with is able to perform the handoff without entering into system determination substate. The combination of Willey and Lee et al fails to expressly disclose ceasing to monitor the paging channel upon a terminating event.

In a similar field of endeavor, Weaver, Jr. et al discloses a system where a soft handoff ends when communication with the first base station is terminated (see column 2, lines 51-65).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Willey and Lee et al with Weaver, Jr. et al to include the above termination of communication with the first base station in order to save resources when the terminal is no longer in range of the first base station.

Claims 3, 4, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willey in view of Lee et al as applied to claims 1 and 7 above, and further in view of Hafiz (US006505042B1).

Regarding **claim 3**, the combination of Willey and Lee et al fails to disclose receiving a paging message on the paging channel of the second base station prior to completion of the cell reselection procedure and responding to the paging message via the second base station after completion of the cell reselection procedure.

In a similar field of endeavor, Hafiz discloses a system where a cellular telephone receives the paging message from multiple BTSs and identifies the BTS from which it receives the paging message having the strongest signal, to which the cellular telephone transmits a response message on the corresponding access channel to acknowledge receipt of the paging message and a link is established with that BTS (see column 3, lines 1-23), which reads on the claimed, "receive a paging message on the paging channel for the second base station prior to completion of the cell reselection procedure and to respond to the paging message via the second base station after completion of the cell reselection procedure."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Willey and Lee et al with Hafiz to include the above receiving a page from multiple stations and responding to the one with the strongest signal in order to increase the probability that a communication link will be established between the cellular phone and a BTS as suggested by Hafiz (see column 2, lines 1-9).

Regarding **claim 4**, the combination of Willey and Lee et al fails to expressly disclose receiving a paging message on the paging channel for the second base station prior to completion of the cell reselection procedure, abort the cell reselection procedure and respond to the paging message via the first base station.

In a similar field of endeavor, Hafiz discloses a system where a cellular telephone receives the paging message from multiple BTSs and identifies the BTS from which it receives the paging message having the strongest signal, to which the cellular

telephone transmits a response message on the corresponding access channel to acknowledge receipt of the paging message and a link is established with that BTS (see column 3, lines 1-23), which reads on the claimed, "receiving a paging message on the paging channel for the second base station prior to completion of the cell reselection procedure, abort the cell reselection procedure and respond to the paging message via the first base station," wherein responding to the page to only one of the BTSs reads on aborting of the handover.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Willey and Lee et al with Hafiz to include the above receiving a page from multiple stations and responding to the one with the strongest signal in order to increase the probability that a communication link will be established between the cellular phone and a BTS as suggested by Hafiz (see column 2, lines 1-9).

Regarding **claim 8**, the combination of Willey and Lee et al fails to disclose receiving a paging message on the paging channel of the second base station prior to completion of the cell reselection procedure and responding to the paging message via the second base station after completion of the cell reselection procedure.

In a similar field of endeavor, Hafiz discloses a system where a cellular telephone receives the paging message from multiple BTSs and identifies the BTS from which it receives the paging message having the strongest signal, to which the cellular telephone transmits a response message on the corresponding access channel to acknowledge receipt of the paging message and a link is established with that BTS (see

column 3, lines 1-23), which reads on the claimed, "means for receiving a paging message on the paging channel for the second base station prior to completion of the cell reselection procedure; and means for responding to the paging message via the second paging channel."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Willey with Hafiz to include the above receiving a page from multiple stations and responding to the one with the strongest signal in order to increase the probability that a communication link will be established between the cellular phone and a BTS as suggested by Hafiz (see column 2, lines 1-9).

Regarding **claim 9**, the combination of Willey and Lee et al fails to expressly disclose receiving a paging message on the paging channel for the second base station prior to completion of the cell reselection procedure, abort the cell reselection procedure and respond to the paging message via the first base station.

In a similar field of endeavor, Hafiz discloses a system where a cellular telephone receives the paging message form multiple BTSs and identifies the BTS from which it receives the paging message having the strongest signal, to which the cellular telephone transmits a response message on the corresponding access channel to acknowledge receipt of the paging message and a link is established with that BTS (see column 3, lines 1-23), which reads on the claimed, "means for receiving a paging message on the paging channel for the second base station prior to completing the cell reselection procedure; means for aborting the cell reselection procedure; and means for

responding to the paging message via the first base station," wherein responding to the page to only one of the BTSs reads on aborting of the handover.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Willey and Lee et al with Hafiz to include the above receiving a page from multiple stations and responding to the one with the strongest signal in order to increase the probability that a communication link will be established between the cellular phone and a BTS as suggested by Hafiz (see column 2, lines 1-9).

Claims 5 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willey in view of Lee et al as applied to claims 1 and 12 above, and further in view of Persson et al (US005577047A).

Regarding **claim 5**, the combination of Willey and Lee et al fails to disclose the wireless communication system is a GSM system.

In a similar field of endeavor, Persson et al disclose soft handoff in a GSM system (see column 4, lines 3-28).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Willey and Lee et al with Persson et al to include the above use of GSM in order to take advantage of the benefits of GSM, such providing users with global coverage.

Regarding **claim 16**, the combination of Willey and Lee et al fails to disclose the wireless communication system is a GSM system.

In a similar field of endeavor, Persson et al disclose soft handoff in a GSM system (see column 4, lines 3-28).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Willey and Lee et al with Persson et al to include the above use of GSM in order to take advantage of the benefits of GSM, such providing users with global coverage.

Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willey in view of Lee et al and Persson et al as applied to claims 5 and 16 above, and further in view of Alvesalo (US005384824A).

Regarding **claims 6 and 17**, the combination of Willey, Lee et al and Persson et al fails to disclose sending system information in a System Information Type 3 message in GSM.

In a similar field of endeavor, Alvesalo discloses sending system information in a System Information Type 3 message (see column 3, lines 3-8).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Willey, Lee et al and Persson et al with Alvesalo to include the system information in a System Information Type 3 message in order to conform with the GSM specification as suggested by Alvesalo (see column 3, lines 3-8).

Claims 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willey in view of Lee et al and Weaver, Jr. et al as applied to claim 23 above, and further in view of Anderson et al (US006161013A).

Regarding **claim 25**, the combination of Willey, Lee et al and Weaver, Jr. et al fails to disclose the terminating event is reception of a first paging message on the second paging channel.

In a similar field of endeavor, Anderson et al disclose a system where a user station maintains its original air channel connection with the originating base station until a new air channel is acquired with an acknowledge message (see column 16, lines 20-36), which reads on the claimed, "the terminating event is reception of a first paging message on the second paging channel."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Willey, Lee et al and Weaver, Jr. et al with Anderson et al to include the above maintaining of the original air channel until the new channel is acknowledged in order to provide a seamless, undetectable handover as suggested by Anderson et al (see column 15, lines 16-20).

Regarding **claim 27**, the combination of Willey, Lee et al and Weaver, Jr. et al fails to disclose the terminating event is the registration with the second base station.

In a similar field of endeavor, Anderson et al disclose a system where a user station maintains its original air channel connection with the originating base station until a new air channel is acquired with an acknowledge message (see column 16, lines 20-

36), which reads on the claimed, "the terminating event is the registration with the second base station."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Willey, Lee et al and Weaver, Jr. et al with Anderson et al to include the above maintaining of the original air channel until the new channel is acknowledged in order to provide a seamless, undetectable handover as suggested by Anderson et al (see column 15, lines 16-20).

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willey in view of Lee et al and Weaver, Jr. et al as applied to claim 23 above, and further in view of Persson et al.

Regarding **claim 28**, the combination of Willey, Lee et al and Weaver, Jr. et al fails to disclose the wireless communication system is a GSM system.

In a similar field of endeavor, Persson et al discloses soft handoff in a GSM system (see column 4, lines 3-28).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Willey, Lee et al and Weaver, Jr. et al with Persson et al to include the above use of GSM in order to take advantage of the benefits of GSM, such providing users with global coverage.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willey in view of Lee et al, Weaver, Jr. et al and Persson et al as applied to claim 28 above, and further in view of Alvesalo (US005384824A).

Regarding **claim 29**, the combination of Willey, Lee et al, Weaver, Jr. et al and Persson et al fails to disclose sending system information in a System Information Type 3 message in GSM.

In a similar field of endeavor, Alvesalo discloses sending system information in a System Information Type 3 message (see column 3, lines 3-8).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Willey, Lee et al, Weaver, Jr. et al and Persson et al with Alvesalo to include the system information in a System Information Type 3 message in order to conform with the GSM specification as suggested by Alvesalo (see column 3, lines 3-8).

Response to Arguments

Applicant's arguments with respect to claims 1-33 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan J. Fox whose telephone number is (571) 272-7908. The examiner can normally be reached on Monday through Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Bryan Fox
May 8, 2006


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER